

REMARKS

The amendments to the specification and to claim 1 correct spelling and transcription errors. The amendment to claim 4 clarifies when the circuitry responds. These do not change the scope or meaning of the specification or claims.

The invention is a detector for leakage from the urethra. The leakage occurs between the inner wall of the urethra and the outer wall of a catheter that is inserted in the urethra. When the patient responds to the physician's instructions, internal pressure in the bladder will cause leakage which is resisted by the urethra. This event and the time and pressure accompanying it are important diagnostic information.

Because the leaked fluid is intercepted close to the body it is at, or nearly at, body temperature. The pressure of a liquid at this temperature is used as the sensed event.

All of the claims have been rejected on Ketchum 5,862,804 under section 102 (b) as clearly anticipated. This rejection reflects the fact that the basic construction of the instrument in this application is identical to the construction in the reference. The use of the instrument is also identical. What differs is the recited precise point of novelty in the instant invention.

This invention was made to overcome some objections to the original patented construction. In the reference, ambient (room)

temperature is sensed by a sensor on the handle and used as one part of a computational exercise to signal the leakage. The liquid temperature is sensed by a sensor in the instrument passage. The difference between the temperatures is used to determine the event.

The reference arrangement requires two sensors. This adds cost and complexity. Even worse, the sensor responding to ambient is not all that consistent. An open door or a breeze, for example, can change its temperature, or perhaps it is obscured in some way. Then the comparative effect may be prevented, or rendered undependable. This invention substitutes circuitry which is independent of ambient, eliminating one sensor and enabling adjustment of the instrument to accommodate local existing conditions.

There are two embodiments. Both utilize the same temperature sensor that is contacted by the liquid. Both include circuitry (but not another sensor) that is independent of temperature to respond to the signal from the wettable sensor.

The apparatus of claim 1 includes a circuit simulative of a selected temperature. The surgeon simply sets the circuit at some level- he may not know what temperature it simulates, although he might. In whatever event its simulated temperature will be lower than that of the sensor. Then when the sensor senses a temperature sufficiently above the simulated level, the

circuitry responds with a signal, recorded data, and whatever else may be desired. Instead of a second sensor, there is merely a knob somewhere to set the instrument.

The other embodiment (claim 4) senses the rate at which the temperature increases when the liquid from the body wets it. When the sensor is dry and exposed to ambient it has a given resistance. If the surrounding temperature changes from time to time, the circuitry does not respond. However, when the sensor is contacted by leaked fluid at body temperature, it swiftly changes its resistance. The circuitry senses this rate of change. In this embodiment there is no necessary adjustment, other than for the rate of change, if such is desired.

The resulting instruments are simple, less expensive, and free of complications that can bother the reference device. There is no showing or suggestion of instruments with such provisions or capacity.

The mere usage of common structure (except for the sensors), and of one sensor does not, it is submitted, show or fairly suggest an instrument without one of the required elements of the reference apparatus (the second sensor) nor of components which provide a suitable signal without it.

There is no showing or suggestion of an adjustable circuit to provide simulated base signal, or of a rate sensitive circuit which does not rely on any particular temperature at all.

It is submitted that the claims are properly allowable as presented.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Versions with markings to show changes made".

Reconsideration of this application and allowance are respectfully solicited.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Donald D. Mon".

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"Versions With Markings To Show Changes Made"

In The Specification:

Please replace the paragraph beginning at page 4 line 15 with the following rewritten paragraph:

A leak point detector 10 according to the invention is shown in Figs. 1-3. Its body 11 may have any desired external configuration, from a [single] simple cylindrical shape to one which is shaped for a better grip. A passage 12 passes a catheter 13.

In The Claims:

Please amend claim 1 as follows:

1 1. (Amended) A leak point wetness sensor for urological
2 investigations comprising:

3 an instrument body having a passage therethrough to
4 pass a catheter, which catheter is intended for insertion into
5 the bladder through the urethra;

6 a receptacle in said instrument body so arranged and
7 disposed as to receive liquid which leaks from the urethra past
8 the inserted catheter;

9 a temperature sensitive detector sensor mounted to
10 [aid] said instrument body where it will be contacted by said
11 leaked liquid, said detector sensor being responsive to the
12 temperature of said liquid and adapted to provide a signal output
13 respective to said temperature;

14 a circuit adapted to generate and provide a reference
15 output simulative of a selected temperature below that of an
16 anticipated temperature of said leaked liquid; and

17 a comparator responsive to the difference between said
18 outputs to detect and inform when the signal output sufficiently
19 exceeds said reference output.

Please amend claim 4 as follows:

1 4. (Amended) A leak point wetness sensor for urological
2 investigations comprising:

3 an instrument body having a passage therethrough to
4 pass a catheter, which catheter is intended for insertion into
5 the bladder through the urethra;

6 a receptacle in said instrument body so arranged and
7 disposed as to receive liquid which leaks from the urethra past
8 the inserted catheter;

9 a temperature sensitive detector sensor mounted to
10 [aid] said instrument body where it will be contacted by said
11 leaked liquid, said detector sensor being responsive to the
12 temperature of said liquid and adapted to provide a signal output
13 respective to said temperature;

14 a circuit adapted to respond to change a temperature of
15 said leaked fluid [which] when said change occurs at a rate
16 indicative of contact with leaked liquid whose temperature
17 approaches that of a human body.